V_2 Neighbourhood Zones.

Five tables show the comparative values of 20 neighbourhoods and groups of neighbourhoods.

V-2-1 **the proportion of families displaced for less than 1** year varied from 0 to 12% in the southern and south-western quarters (ShQ., DB., Cp., Q3, XuX.). It appears high in Ar (30%), QaFa (40%), WAK (21%), and very high in eastern quarters (MR 54% et KZK 59%).

V-2-2 **the proportion of illiterate mothers**, which vary from 65 to 75% in most of northern and north-western quarters (XaX, TM, PW, WAK), is much higher in southern and south-western quarters (85 à 95%). It is in comparison interesting to note that in MR 53% of tested mothers could read..

V-2-3 **The proportion of wasted and/or stunted children** is significantly lower than Kabul average in several southern and south-western quarters (Q3, DB, ShQ, Cp). On the contrary, it is significantly higher in eastern quarters (MR, KZK). Interestingly, there is an island of high proportion of growth retardation in the group DeAfghanan-QAbchakan.

V-2-4 There is a significant difference in the nutritional status between girls and boys in most neighbourhoods. Several quarters, apparently having overall growth retardation rates near the average of Kabul, have in fact a high proportion of malnourished girls. This is the case of Qsb (housing development blocks in the north), and of ShQ, WAK, XuX. In other quarters, the high proportion of growth retardation is mostly due to malnutrition among girls (Afg, QZK, DeDa).

V-2-5 Three groups of quarters have a child mortality rate significantly different than the average rate of Kabul (189‰) :

- lower rates in western quarters (Cp, XuX), and center-west (Sha, TM).
- higher rates in southern quarters (DB, Q3)
- higher rates in eastern (MR, QZK, YT) and center-eastern quarters (WAK, Afg).

Moreover, Aryana represents an island of high mortality rate (326‰).

VI- Comments

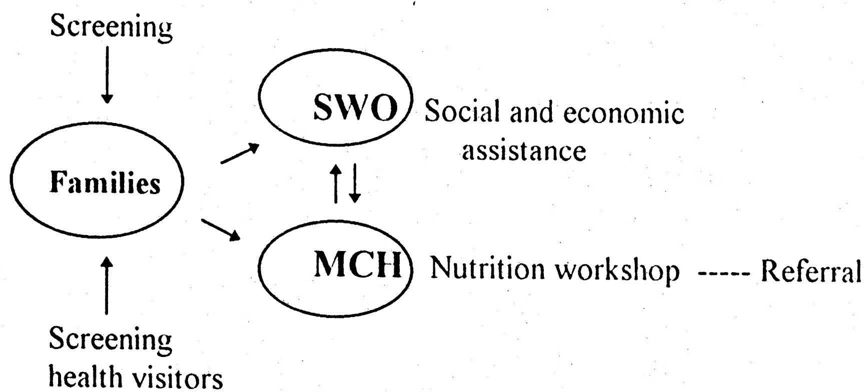
VI-1 Kabul

The choice of sensitive enough **thresholds** to assess growth retardation of Kabul children reveals widespread child malnutrition, affecting almost half of the 4 333 assessed children.

In the large majority, this is a moderate (3rd grade) malnutrition, but affecting, due to its duration, the growth and development of these children. While wasting affects 20% of children on average, **stunting affects almost 50%.**
This kind of chronic malnutrition probably represents a major child mortality risk factor in Kabul, of which this survey confirms the high rate (189‰ < 5 years of age). This overly-high mortality cannot be attributed to acute and severe malnutrition, of which the prevalence is low in Kabul, less than 1%, but rather to the **combined action** of widespread chronic malnutrition and the biological weakening it leads to, combined with the common diseases, mostly diarrhea and respiratory tract infections, and with the almost complete lack of health education.

These observations confirm the socio-environmental analysis. The war never led to total food blockade, various foodstuffs having always been present in Kabul's markets. But **the progressive weakening of families** economic and educational situation, and the increase of certain types of expenditures affecting their food purchasing power (notably expensive medicines), has often restricted their access to adequate and locally available food.

Several conclusions become apparent after the study of these facts :
- the choice of the **nutritional indeces**, used not only for surveys, but also for interventions, should not be limited anymore to only criteria of wasting (i.e. brachial perimeter) which are useful to detect death risks linked with acute and severe malnutrition. Weigh for height and height for age indeces, following **the Waterloo cross-table**, would be much more effective as part of Kabul's children 's nutritional status improvement policy, and could be usefully combined, in MCH centers, with the growth-speed follow-up.
- **nutritional interventions in Kabul** should not be restricted anymore to quantitative and short-lived distributions, especially if it is not local foodstuffs. Nor should a large part of available resources used for specialized and intensive refeeding. They should be integrated :
- in a socio-economic policy aimed at improving families long-term food purchasing power
- in a medico-social policy aimed at screening families at risk, to give them a basic social aid, to orientate them toward a nutritional follow-up in MCH centers, and to provide them with a practical health education.



SWO : social welfare office
MCH : mother and children center

VI-2 Neighbourhood zones

VI-2-1 **Noticable differences in nutritional characteristics** between different neighbourhoods, can be matched with some socio-environmental data.

- Between the group of southern neighbourhoods (DB, Q3), of which malnourished children rates are below Kabul's average, and the group of eastern neighbourhoods (MR, KZK) and center-eastern (Afg), of which malnourished children rates are above-Kabul's average, it seems that there is a **degradation gradient** of the children's nutritional status probably linked to :
- habitat type : deteriorated and overcrowded housing development (microrayon) or slums on the one hand, rural houses with vegetable garden and poultry, on the other hand.
- the proportion of recenty displaced people, high in eastern neighbourhoods (40%), low in the southern (0 to 5%).

VI-2-2 **The significant gap between boys and girls nutritional status** raises questions about intervention effectiveness. Higher malnutrition risks which girls are exposed to cannot be prevented by usual indirect means : distributions, consultation when requested.
It would be useful and urgent to set up complementary intervention systems which could reach girls at least as well as boys, notably :
-within their families, using health visitors, referring early children at risks to MCH centers.
- within schools, by setting up school canteens.
- by social assistance to families, through neighbourhood social centers, on a scale of 400 or 500 families per center.
These modes of intervention should be set up giving priority to zones where the rates of malnourished girls are the highest.

VI-2-3 **The variation**, between different groups of neighbourhoods, **of mortality rates of children below 5**, allows some interesting associations. Mortality rates are significantly higher than the Kabul average rate in eastern neighbourhoods (MR, KZK) and in the southern neighbourhoods (DB, Q3). They show medium or low values in north-western and western neighbourhoods (SHA, XUX, CP).

Yet, eastern neighbourhoods have the highest malnutrition rates whereas southern neighbourhoods have the lowest. Thus, it is tempting to attribute this high child mortality to different causes :

- in the **eastern neighbourhoods**, occupied by unhealthy and overcrowded blocks or slums, and with a high proportion of displaced persons, high mortality is probably due to the combined cause of **chronic malnutrition and infectious diseases**.
- in southern and **south-western neighbourhoods**, where rural habitat is frequent, but public services ineffectual, notably hospitals, MCH centers and schools, high mortality is probably linked with an overall lack of access to prevention and care, and with a **very low educational level**, as confirmed by mothers illiteracy rate which is around 100%.

It seems thus appropriate to adopt first 2 different intervention strategies for eastern and southern neighbourhoods :

- in the east, a social intervention plan should be based on a nutritional policy reaching the population as a whole, by subsidizing basic foodstuffs, implementing school canteens and providing work in priority to heads of families.

The families satisfactory educational level should allow developing health education, to optimize mothers food choices according to their means, and to teach them to adopt simple hygienic practices. A priority sanitation policy should be undertaken and coordinated with health education, notably in schools.

In the south, the priority of a social intervention plan should be to reorganize public services networks, notably medical social and educational. MCH centers should be refurbished, their personnel trained and supervised, jointly with home visitors teams. Those centers, organized in workshops, should promote health education concerning daily hygiene, vaccination routine, screening and early treatment of digestive and respiratory infections. Parallel to this, schools should include in their official programme a practical health education, notably for girls, who, while waiting to be mothers themselves, could transmit basic messages to their illiterate mothers.

VII- CONCLUSION

The state of health of Kabuls' population is precarious, as shown by numerous indicators, notably the nutritional indicators. The complex causes of this biological vulnerability, its long duration, and its widespread nature, exeed the frame of emergency intervention. It is necessary to establish a long term social intervention plan comprising 3 types of measures : socio-economic, socio-educational, and medico-social.

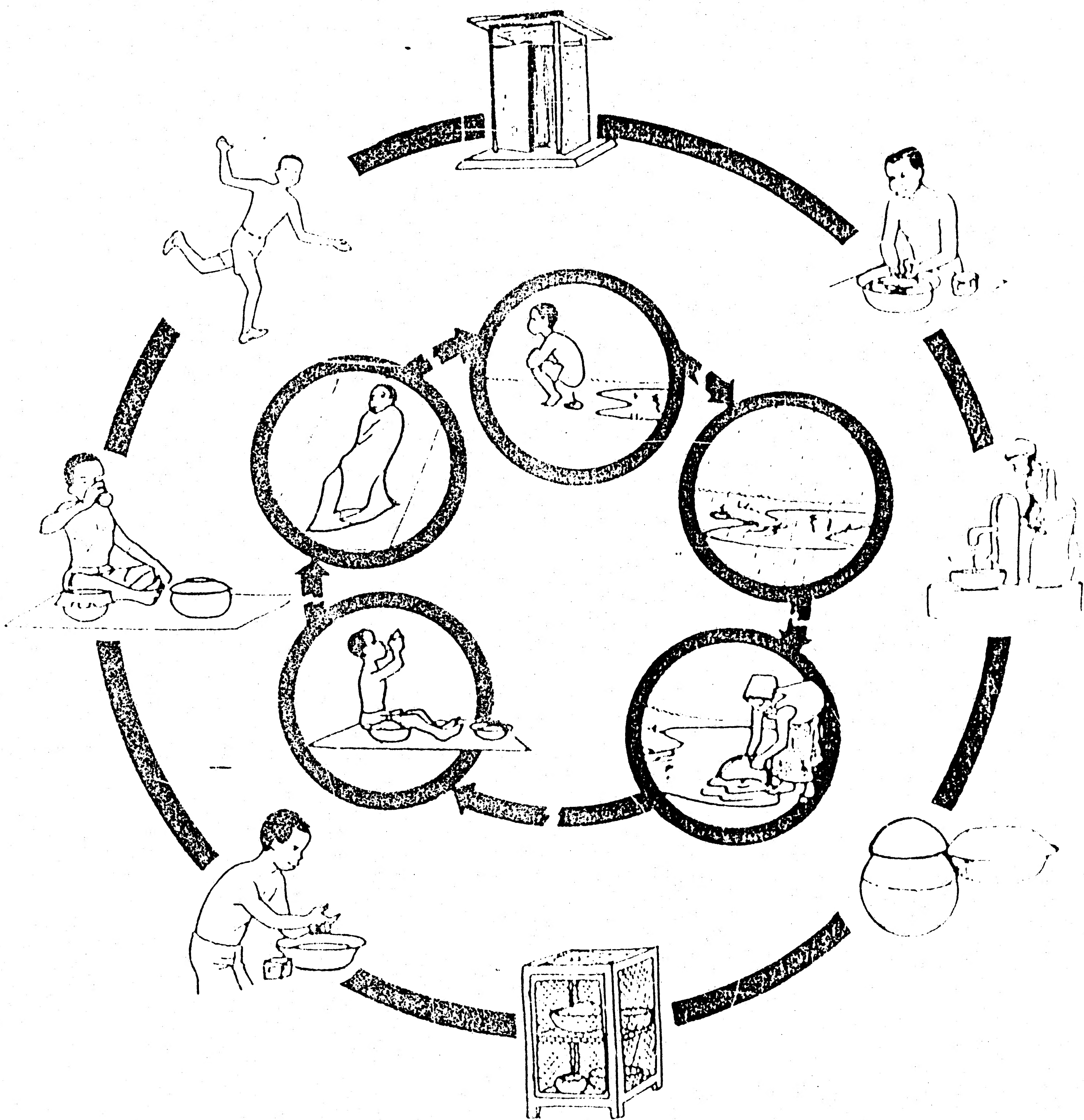
This plan must reflect the realities and needs of the field, and be based upon pertinent socio-geographical sectorisation. Data collection and follow-up of families should be organized around traditional neighbourhood zones which include 2 000 to 10 000 persons, and which are a living reality in large cities as well as in rural areas.

This survey gives an approach to the diversity of Kabuls'neighbourhoods, some of them associating their issues, some others showing singularities according to imprecise causes or borders.

In the future, the distribution of social workers, the modes and priorities of relief, and the sectors of surveys, will depend widely on a neighbourhood zones organisation.

MAHALA OF KABUL

Xax	khaikhana
KB	khodja-bugra
Qsb	qasaba
TM	tahia-mascan
Sha	sharara
Tai	taimani
QaFa	qala-fatullah
Pw	parwan
SeN	shar-e-nao
WAK	wazir-akbar-khan
6D	shesh-darak
Ar	aryana
XuX	khushal-khan
Cp	compani
Qab	qale-abchakan
Afg	afghanan
Cen	central
MR	microrayan
QZK	qalai-zaman-khan
YT	yaka-tut
DB	dastebarchi
SQ	shar-qala
Q3	qarte-seh
DeDa	dedana



MANTEQA :	1-KABUL	- XaX123+K	3-PARWAN	4-Ta Mascar	5-SQ.WA+QI	6-WAK- 6D	-MICRORAY	8-De Afghar	9-Sharara	10-Q.Z.Khar	11-Khu.Kha	12-Cp	13-DB	4-SharQ.Sh.
TOT. NB. FAM. ASS.	3469	627	196	194	202	167	169	232	252	147	178	115	233	110
TOT. NB. CH<5 A+D	8367	1561	472	526	472	425	387	644	550	370	379	279	575	263
CH.<5 A	6783	1278	384	450	391	335	293	489	493	294	332	248	411	223
CH. <5 D	1584	283	88	76	81	90	94	155	57	76	47	31	164	40
CH.<5 A / FAMILY	1.95	2	1.96	2.3	1.93	2	1.7	1.9	1.9	2	2	2.1	1.8	1.9
TOT. NB. CH.<5 ASS.	4333	742	242	223	254	205	240	263	363	197	257	140	278	120
TOT. NB. FEMALES <5	2185	398	107	113	114	104	130	142	188	107	119	71	151	57
TOT. NB. MALES <5	2148	344	135	110	140	101	110	121	175	90	138	69	127	63
% FAM. DIS<12M /TF	15.1	6.1	8.2	12.4	30.7	21.5	54.4	10.3	16.6	59.8	12.4	3.5	15.1	0
% FAM. ILLIT./TF	76.1	72.2	66.3	74	67.3	non ass.	47.3	80.2	92.1	74.1	95.5	89.6	96.9	92.8
%W .T.	18.3	20.6	9.5	12.5	10.24	13.6	55.4*	29.6	20.6	32.5	23.3	11.4	2.5	12.5
% W. F * M	22.1 * 14.4	27.6 * 12.5	10.3 * 8.9	14 * 10	8.8 * 11.4	22.1 * 4.9	55.4 * 55.4	35.2 * 23.1	20.7 * 20.6	36.4 * 28	27.8 * 19.4	15.5 * 7.2	1.3 * 3.9	19.3 * 6.3
% St.T.	49.2	50.3	59	49.3	48.4	55.1	47.5	56.6	45.7	65.5	49	37.1	35.2	63.3
% ST. F * M	51.3 * 47.1	48.2 * 52.6	62.6 * 57	52.6 * 41.5	47.4 * 49.3	54.8 * 55.4	50 * 44.5	59.9 * 52.8	51 * 40	76.6 * 52	47 * 50.3	56.3 * 16.9	33.7 * 37.3	84.2 * 44.4
% W/St. T.	9.6	9.6	7.4	9	8.3	7.3	25.4	19.7	7.2	17.8	11.3	4.3	1.1	10.8
% W/St. F * M	11.7 * 7.3	12.8 * 5.8	7.5 * 7.4	8.8 * 8.5	7.9 * 8.6	11.5 * 3	26.1 * 24.5	21 * 18	6.9 * 7.4	23.4 * 11	14.3 * 8.7	7 * 1.4	0 * 2.4	15.8 * 6.3
CMR o/oo T	189	181	186	144	172	212	243	241	104	205	124	111	308	152

MANTEQA :	15-DeDana	16-Q3	17-Mamurin	18-Aryana	19-Qasaba	20-Y.T.	21-Central		
TOT. NB. FAM. ASS.	92	199	70	80	44	76	86	nombre total des familles interrogées	total number of assessed families
TOT. NB. CH<5 A+D	182	455	144	184	105	214	180	total des enfants nés depuis 5 ans	number of children born in the last 5 years
CH.<5 A	154	350	120	124	97	166	151	enfants vivants de moins de cinq ans	children under 5 alive
CH. <5 D	28	105	24	60	8	48	29	enfants décédés	children under 5 dead
CH.<5 A / FAMILY	1.7	1.7	1.7	1.6	2.2	2.2	1.7	nombre moyen d'enfants <5ans par famille	average number of children per family
TOT. NB. CH.<5 ASS.	109	235	78	109	50	110	118	nombre total d' enfants mesurés	number of children assessed
TOT. NB. FEMALES <5	54	129	35	55	24	38	49	nombre de filles mesurées	nb of girls assessed
TOT. NB. MALES <5	55	106	43	54	26	72	69	nombre de garçons mesurés	nb of boys assessed
% FAM. DIS<12M /TF	0	7.5	4.3	31.2	6.8	0	20.9	proportion de familles déplacées< 12 mois	proportion of displaced families<12months
% FAM. ILLIT./TF	76.1	87.4	78.6	78.7	50	57.9	89.5	proportion des mères illettrées	proportion of illitrated mothers
%W.T.	22	10.7	5	8.2	12	12.7	4.2	prop. d'enfants trop maigres (z-score<-2)	proportion of wasted children (z-score<-2)
% W. F * M	33.3 * 10.9	14.7 * 5.7	8.6 * 2.3	9.1 * 7.4	12.5 * 11.5	15.8 * 11	4.1 * 4.3	prop. des filles et des garçons trop maigres	proportion of wasted girls and boys
% St.T.	76.4	53	30.3	34	52	26.4	33	prop d'enfants trop petits (z-score <-2)	prop. of stunted children (z-score<-2)
% ST. F * M	75.9 * 76.3	48 * 53.8	31.4 * 28	31 * 37	62.5 * 42.3	21 * 29	30.6 * 34.8	prop. des filles et des garcons trop petits	prop. of stunted girls and boys
% W/St. T.	16.5	7	2.6	1	10	2	0	prop. d'enf. trop maigres et trop petits (z-sc.<-2	prop. of wasted and stunted children z-sc.<-2)
% W/St. F * M	25.9 * 7.27	9 * 4.8	3 * 2.3	1.8 * 0	12.5 * 7.7	2.6 * 1.4	0	prop. des filles et des gar. tr.maigres et tr. petit	prop. of wasted and stunted girls and boys
CMR o/oo T	154	231	170	326	76	224	161	taux de mortalité des enf <5ans sur 5ans	children under 5 mortality rate

CMR < C.I 95	**CMR 180-200 o/oo**	CMR > C.I.95		WAST. < C.I .95	**WASTING 17-19 %**	WAST. > C.I. 95
	KABOUL				**KABOUL**	
Sha	XaX	**MR**		**DB**	XaX	**Afg**
XuX	Pw	**Afg**		**Cen**	Sha	**KZK**
Cp	SQ-QaFa	**DB**		**Mam**	XuX	**MR**
Qsb	WAK	**Ar**		**Ar**	TaMa	
	TaMa	**Q3**		**Pw**	WAK	
	ShQ				Cp	
	Cen				Qsb	
Stunted < C.I. 95	**STUNTED 47-51 %**	Stunted > C.I. 95		disp. < C.I. 95	**SPLACED < 1y. 14-16**	disp. > C.I. 95
	KABOUL				**KABOUL**	
DB	XaX	**Afg**		**Cp**	WAK	**MR**
YT	TaMa	**KZK**		**DB**	Sha	**KZK**
Cen	SQ-QaFa	**DeDa**		**Q3**	Tai	**QaFa**
Mam	WAK	**SQ**		**SQ**	Afg	**Ar**
Ar	MR			**Cen**	XuX	
	Q3			**Qsb**	XaX	

KEP Kabul Emergency Programme.

Office of research and action for vulnerable communities in Kabul

- Afghanistan -

nutritional status and mortality rate of children below 5 years of age in Kabul-city through a neighbourhood survey

29 April, 4 May 1995

Contents

FOREWORD

We thank the **Minister of Public Health** for his support in the realization of this survey and for authorizing his services and personnel to participate in it.

This survey has been carried out by a team of Kabul's doctors and volunteers belonging to the following associations and departments :

- **Nutrition department, MOPH.**
- **AVICEN**
- **Indira Ghandi hospital**
- **Afghan Red Crescent**
- **Solidarité**
- **AFRANE.**

Participant doctors :

Drs :

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Rahim
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Leila
Nuraga
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I-Introduction

War has been Kabul's daily reality for 3 years, interrupted by precarious lulls, punctuated by shifting and bloody battles, upsetting by turns central, eastern, southern and western neighbourhoods.
The results have been the large-scale flight and displacement of families, increasingly difficult access to food and drinking water, increased exposure to traumatic and infectious risks, the interruption of public services and the collapse of medical and social means of intervention.

As a consequence, mortality and morbidity rates have constantly deteriorated, especially among the most vulnerable age-brackets, notably children below five years of age and pregnant or nursing mothers.

According to an Oct. 1993 OMS/UNDP report, the crude mortality rate of the Afghan population as a whole was 28%, and life expectancy between 40 and 42 years. The child mortality rate, which had been estimated in 1971 at 189‰ in rural areas and at 182‰ in urban areas is probably over 200‰ according to recent estimates. The main direct mortality causes for children below 5 are : the combination of malnutrition/diarrhea (50%), respiratory tract infections (25%), and contagious diseases (measles, pertussis).

Two recent surveys made in Kabul (MSF, Dec. 1993, ICRC, May-Nov. 1994) confirm, according to wasting indicators, the high prevalence of child malnutrition among those below 5. The ICRC survey shows a deterioration of the nutritional status among children of displaced families in the northern neighbourhoods. Moderate malnutrition rose from 31% in May to 37% in November. Severe malnutrition remained steady at 1% (according to QUAC test)

These data correspond to recent estimates for Afghanistan as a whole, according to which 30% of children below five show a moderate level of malnutrition.

Malnutrition, which represents a fundamental problem in Afghanistan, needs to be better described and analyzed, notably in Kabul, where it affects especially mothers, of which 70% are anemic, as well as new-born, of which 20 to 30% weigh less than 2500 grammes. This malnutrition is not of the acute variety, encountered in situations of severe food shortage, and which directly causes death. Rather, it is more chronic, weakening persons and ages most vulnerable and causing considerable mortality when combined with existing pathologies.

The military and political situation in Kabul has radically changed in April 1995. The government controls again the southern and south-western districts of the city which, for the first time since 1992, can be accessed by the central administration and take advantage of an almost complete end to the fighting.

Estimates and epidemiological surveys performed so far in Kabul came up against two difficulties:

- firstly, the state of war and the constant population movements have quickly made obsolete the collected information, and surveys were too rare to allow a true follow-up.

- secondly, the lack of information about the structure and composition of districts couldn't lead to a relevant differentiation of neighbourhood zones. Districts, "old city", western, southern and northern neighbourhoods have been used without the accurate identification of relevant social homogeneity factors, knowledge of which is absolutely necessary for successful intervention.

Taking into account these observations, it seemed interesting and useful to perform a simple and quick family and nutritional survey in Kabul as a whole, taking advantage of the recent peaceful conditions. We utilised for the first time a neighbourhood zones approach, and indicators characterizing overall child nutritional status, assuming that at this time emergency measures should phase out in favour of a central prevention and development policy

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II- Area and sector concerned

Kabul's population is estimated at more than 1 000 000 persons spread over 16 districts. The distribution by age brackets allows an estimate of the number of children below five at around 180 000, belonging broadly to 100 000 families.

Kabul is divided into 2 types of subdivisions :
- administrative subdivisions, from "Nahias"(districts) for the largest, to "Guzars"for the smallest.
- **traditional neighbourhoods**, which are more modest in size

Those neighbourhoods have different sizes, from less than 10 000 inhabitants to more than 100 000, and their names refer to a village (qala), a town (shar), a garden (bagh), a valley (sakhi), a room (kotay), a neighbourhood (karte), a street (cocha)...
Housing development buildings are called Famili, Projè, or microrayon.

We have mostly worked, in this survey, on mahala scale, or groups of mahala, representing 10 000 to 100 000 persons zones.

The oldest neighbourhoods are located to the east of Asmai mountain (shar-e-kona).The town has been developing considerably since the early century, first to the south (qarte seh) and to the north (shar- e- nao) of the Asmai mountain, and more recently in the east (microrayon), the north (khaikhana), and the west (khushal khan)
The neighbourhoods located to the south and south-west of the Asmai mountain are quite open or rural, contrasting with crowded housing estates or concrete apartment blocks, which occupy several neighbourhoods to the north and north-east of the mountain.

The official estimate of Kabul's population in thousands for 1994-1995, according to Statistics Central Office, is as follows (from an extrapolation of the 1986 census)

- district 1	: 121
- 2	74
- 3	120
- 4	68
- 5	186
- 6	214
- 7	205
- 8	149
- 9+16	167
- 10	149
- 11+15	307

Due to the almost complete destruction of several high density neighbourhoods, notably in the Nahias 1, 3, 5, and 8, as well as the Kabulees massive flight or displacement in the last 3 years, these figures must be considered with reserve.
It seems reasonable to estimate that 1 000 000 persons live above a north-western/south-western line going through the Asmai mountain and that 300 000 persons live below this line.

The proportion of displaced persons, notably from rural areas, is considerable, since it represents almost half the whole population. However, we observe high variations from one neighbourhood to another.

III- Objectives

When an important change of state occurs in a community, or when we want to apply to it a new method, it is interesting to obtain first a rapid overview at a low cost price. This is the case in Kabul at this time.

III-1 Neighbourhood zones approach

This quick survey, performed within 6 days in 28 neighbourhoods among 4 800 children, must be considered, without any other ambition, as a first orientation in the comparative knowledge of nutritional status and mortality rate among girls and boys below 5, according to neighbourhood zones. It is linked with an ongoing survey of the sociological and urban context of Kabul. It has been devised, firstly, to ease the finalization of stratified surveys by neighbourhoods according to standard methodologies of sample selection, and secondly, to indicate the priorities of interventions.

III-2 Growth retardation indicators

The constant availability of a variety of local foodstuffs in spite of the war, urged us to use indicators characterizing not only wasting, but also stunting, most often linked to chronic malnutritions. As a consequence, index thresholds characterizing Kabul's malnourished children are sensitive enough to indicate the volume of an overall social, economic, and educational intervention programme.

III-3 sensibilization and training

this survey also indirectly allowed mobilization of 17 pediatricians working in Indira Ghandi hospital for children, the MOPH nutrition department, and in MCH centers, and to train them in basic public health practice and preventive pediatrics.
These doctors contitute at present a permanent group and will take part in the formation of a health observers network.

IV- Methods

IV-1 The survey was conducted from 29 April to 4 May 1995, parallel to the second round of the national vaccination campaign. Survey teams went into the vaccination centers, questioned all the mothers and measured all present children.

We took this opportunity for several reasons :
- the campaign mobilizes most of the families
- the large number of vaccination points (more than 150 mosques, schools, clinics, etc.) allow families to gather by small groups, corresponding to neighbourhood zones.

Two theoretical bias are also to be noted :

- are families who come to the centers representative ? mass campaign information is broadcast widely, mostly orally. Because they hope to obtain aid or relief, most families attend these campaigns, and it doesn't seem that disadvantaged families are under-represented
- do mothers hide their ill children ? This legend goes among persons who perhaps have never witnessed the anguish and fierceness with which Afghan mothers take every opportunity to snatch medicine or aid for their ill child.

Anyway these two bias have little importance in face of the indicative nature of this survey, which allowed us to intervene in a large number of neighbourhoods in a few days and at little expense, and thus, to have a better idea of their possible disparities.

28 neighbourhoods have been selected according to the following criteria :
- size of population
- ethnic and socio-economic characteristics
- balanced geographical distribution across the city.

80 centers have been selected according to their balanced distribution in the 28 neighbourhoods, and to their accessibility.

IV-2 The teams

17 medical teams were set up and trained. Each team included a pediatrician in charge of data collection, a nurse from an MCH centre, a volunteer from Afghan Red Crescent, and a crowd controler. Moreover, 4 doctors performed the daily supervision of the teams, controlling measurement and quality of questionaire filling .
Each team was sent to the neighbourhoods they knew the best, and visited one different center per day, from its opening to closure. Most of the teams worked for 5 or 6 days, each of them visiting 5 to 6 centers.

A 2 day **preliminary training** was performed, including :
- introduction to nutritional indicators and growth graphs
- practical training in anthropometric measurement techniques
- introduction to medical statistics and epidemiology
- local making of three-legged hanging scale and measuring apparatus
- testing of scales and of measuring apparatus
- methods and protocols of survey

The following equipment was given to each team :
- a measurment set for children below 2 years of age
- a measurment set for toddlers
- a three legged Salter weighing machine
- a measuring tape
- pencils and measurment files

IV-3 Questionnaire and measurments

They have been limited to 6 questions to be asked to mothers and 5 measures and observations.

6 questions :

- what is the name of the head of family ?
- where do you live ?
- for how long ?
- where were you living before ?
- how many children have you had in the last 5 years and how many are dead ?
- how old is this child ?

5 measures and observations

- sex of the child
- weight, height, brachial perimeter of the child.
- reading test for mother.

The following estimates have been obtained :

- proportion of families displaced for less than 1 year
- proportion of illiterate mothers
- mortality rate of children below five
- wasting and/or stunting of children below 5 :

  - stade 1 = z-score >-1 s.d. : normal
  - stade 2 = z-score <-1 s.d. et >-2 s.d. : mild

  ---**significant <-2 standard dev.**

  - stade 3 = z-score <-2 e.t. et >-3 e.t : moderate
  - stade 4 = z-score <-3 e.t. : severe

We chose, for their accuracy and their pedagogic qualities the curves of "Centre international de l'enfance de Paris 1962 ", which are similar to NCHS standards for children below 5 years of age.

IV-4 test of statistical significance

We used the standard error test for difference of proportions, with a confidence interval of 95%.

Notes

- Mothers have been helped in evaluating time, and the age of their children, by resorting to recent events.
- a 110 cm rule was used to allow mothers to indicate the size of absent children.

V- Results

77 centers distributed over 28 neighbourhoods were visited from 29 April to 4 May 1995, for a definitive number of 4333 children below 5 assessed (2148 girls and 2185 boys).
For easier analysis, we have grouped certain contiguous zones where there were no major differences, to finally obtain 20 neighbourhoods or groups of neighbourhoods :
- Khaikhana 1+2+3+Khodja Bugra (**XaX**, KB)
- Parwan 1+2+3 (**PW**)
- Tahia-Mascan+Sarandoy+BadamBagh+90 Famili+ZurAbad (**TM**,Srd,BB,90F,ZA)
- Sharara+KololaPushta (**Sha**, KPu)
- SharQala-WasirAbad+QalaFatullah+Taimani (**SQWA**, QaFa, Tai)
- Wasir Akbar Khan + Sesh Darak (**WAK**, 6D)
- Microrayon 1+2+3+4+BibiMaro (**MR**, BiMa)
- QalaiZamanKhan (**QZK**)
- DeAfghanan+QaliAbchakan (**Afg**, QAb)
- KhushalKhan+Karga (**XuX**)
- Compani (**Cp**)
- Dastebarchi (**DB**)
- SharQala-Shardeh+QalaWasir+GulKhana+QalaiBaktiar(**ShQ**,QW,GulX,QBaK)
- QarteSeh (**Q3**)
- DeDana (**DeDa**)
- Qasaba (**Qsb**)
- Yakatut (**YT**)
- Central+Pol-e-Artan+Shandawol (**Cen**)
- Mamurin (**Mam**)
- Aryana (**Ar**)

The number of children evaluated in each zone varied from more than 700 in the most populated area, to around 100 in the least populated.

V-1 Kabul

- **15%** of the families interviewed had been **displaced for less than 1 year**.

- **76%** of the 3400 mothers tested failed the **literacy test**.

- 22% of girls and 14% of boys showed a **significant wasting** (average : 18% of wasting among 4333 children measured). The comparison by sex revealed a significant difference (CI 95%).
51% of girls and 47% of boys showed a **significant stunting** (average 49%). The comparison by sex rervealed a significant difference.
11% of girls and 7% of boys showed a **significant wasting and stunting** (average 9.6%). The comparison by sex revealed a significant difference.

The child mortality rate calculated from 8367 children born in the last 5 years was 189‰.

The average number of children below 5 per family was 1.95.

KEP Kabul Emergency Programme.

Office of research and action for vulnerable communities in Kabul

- Afghanistan -

nutritional status and mortality rate of children below 5 years of age in Kabul-city through a neighbourhood survey

29 April, 4 May 1995

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